



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

09/815,772

03/22/2001

Johni Chan

69907

5285

22242

7590

05/03/2004

FITCH EVEN TABIN AND FLANNERY

120 SOUTH LA SALLE STREET

SUITE 1600

CHICAGO, IL 60603-3406

EXAMINER

MASON, DONNA K

ART UNIT

PAPER NUMBER

2111

DATE MAILED: 05/03/2004

8

Please find below and/or attached an Office communication concerning this application or proceeding.

2

Office Action Summary

Application No.

09/815,772

Applicant(s)

CHAN, JOHNI

Examiner

Donna K. Mason

Art Unit

2111

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on February 14, 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 5.6.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. Claim 1 recites the limitation "the second main bus" in line 21. There is insufficient antecedent basis for this limitation in the claim. Dependent claim 2 recites "a second main bus" in line 4. Therefore, to cure the antecedent basis problems of claim 1, it is recommended that Applicant cancel claim 2, and add the limitations of claim 2 to claim 1, as follows:

In line 12, after "module processor data channel," insert --a second hybrid switching module main data channel--.

After line 16, insert --a second main bus coupled to the second hybrid switching module main data channel;--

4. Claim 4 recites the identical limitation as recited in claim 2. Therefore, if Applicant cancels claim 2 in view of the above recommendation, then claim 4 should be cancelled.
5. Claim 5 is dependent on claim 4. Therefore, if Applicant cancels claim 4 in view of the above recommendation, then in claim 5, line 1, change "Claim 4" to --Claim 3--.

6. Claim 5 rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are: the connection between the third main bus and the third hybrid switching module main data channel. More specifically, claim 5 recites the limitation "a third main bus coupled to the second hybrid switching module main data channel" in lines 4-5. It appears that "the second hybrid switching module" in line 4 should be changed to --the third hybrid switching module--.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 6-18 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,643,795 to Sicola, et al. ("Sicola").

With regard to independent claim 6, Sicola discloses an apparatus including a first hybrid switching module (Fig. 3, item 204). The first hybrid switching module includes a first hybrid switching module processor data channel (Fig. 3, item 231B), a

Art Unit: 2111

first hybrid switching module main data channel (Fig. 3, item 221D), an input/output link data channel (Fig. 3, item 223A), and a first switch (Fig. 3, item 204) coupled to the first hybrid switching module processor data channel, and a first bridge (Fig. 3, item 107) coupled to the first hybrid switching module data channel. As disclosed, the first switch selectively couples to the first bridge and selectively couples to the input/output link data channel, where the first hybrid switching module processor data channel is thereby selectively coupled to the first bridge and selectively coupled to the input/output link data channel (column 7, lines 48-60 and column 8, lines 18-30).

With regard to independent claim 13, Sicola discloses a system including a first hybrid switching module processor data channel (Fig. 3, item 231B), a first hybrid switching module main data channel (Fig. 3, item 221D), a first hybrid switching module bus data channel (Fig. 3, item 221H), an input/output link data channel (Fig. 3, item 223A), and a first hybrid switching module (Fig. 3, item 204) coupled to the first hybrid switching module processor data channel and to the first hybrid switching module main data channel, where the first hybrid switching module selectively couples to the first hybrid switching module bus data channel and selectively couples to the input/output link data channel, and where the first hybrid switching module processor data channel is thereby selectively coupled to the first hybrid switching module bus data channel and selectively coupled to the input/output link data channel, and the first hybrid switching module further includes a failure mode that couples the input/output link data channel with the first hybrid switching module bus data channel during a failure (column 7, lines 48-60 and column 8, lines 18-30).

With regard to dependent claims 7-12 and 14-18, Sicola discloses the apparatus further including a first processor (Fig. 3, item 101) coupled to the first hybrid switching module processor data channel (Fig. 3, item 231B), and a second hybrid switching module (Fig. 3, item 205) coupled to the input/output link data channel (Fig. 3, item 223A). Sicola also discloses a second processor (Fig. 3, item 102) coupled to a second hybrid switching module processor data channel (Fig. 3, item 231B (between item 205 and item 102)), the second hybrid switching module being coupled to the second hybrid switching module processor data channel.

Therefore, Sicola reads on the invention as claimed.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sicola in view of U.S. Patent No. 6,038,630 to Foster, et al. ("Foster").

With regard to claims 1-5, Sicola discloses a system (Fig. 3, item 100) including a first processor (Fig. 3, item 101) including a first processor data channel (Fig. 3, item 231B), a first hybrid switching module (Fig. 3, item 204) including a first hybrid switching module processor data channel (Fig. 3, item 231B), a first hybrid switching module main data channel (Fig. 3, item 221D), and a first input/output link data channel (Fig. 3, item

Art Unit: 2111

223A), a first switch (Fig. 3, item 204), and a first bridge (Fig. 3, item 107), the first hybrid switching module processor data channel being coupled to the first processor data channel. Sicola also discloses a first main bus coupled to the first hybrid switching module main data channel, a second processor (Fig. 3, item 102) including a second processor data channel, and a second hybrid switching module (Fig. 3, item 205). The second hybrid switching module includes a second hybrid switching module processor data channel, a second input/output link data channel, a second switch (Fig. 3, item 205), and a second bridge (Fig. 3, item 107), the second hybrid switching module processor data channel being coupled to the second processor data channel, and the second input/output link data channel being coupled to the first input/output link data channel. As disclosed in Sicola (column 7, lines 48-60 and column 8, lines 18-30), the first hybrid switching module includes a failure mode allowing the second processor to access the first main bus, and a second hybrid switching module includes a failure mode allowing the first processor to access the second main bus.

Sicola does not expressly disclose a crossbar switch and arbiter. Foster discloses a crossbar switch (Fig. 3, item 240) and arbiter (Fig. 3, item 235). At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine Foster with Sicola. The suggestion or motivation for doing so would have been to provide an enhanced shared access control approach for an integrated system (column 2, lines 4-10).

Therefore, it would have been obvious to combine Foster with Sicola to obtain the invention as specified in claims 1-5.

Response to Arguments

11. Applicant's arguments (see Paper No. 7, filed February 17, 2004), with respect to the rejection(s) of claims 1 and 2 under 35 U.S.C. 102(b) in view of Hathorn, et al., and the rejection(s) of claims 1-18 under 35 U.S.C. 102(b) in view of Fu, et al., have been fully considered and are persuasive. Therefore, the rejection has been withdrawn.

However, upon further consideration, a new ground(s) of rejection is made in view of Sicola and Foster. Sicola discloses a failure mode, and Foster discloses a crossbar switch and arbiter.

As amended, claim 6 recites "*a first hybrid switching module*" (emphasis added) including a processor data channel, a main data channel, an input/output data channel, a first switch coupled to the processor data channel, and a first bridge. It should be noted that making the pieces of the hybrid switching module integral is not sufficient by itself to provide a patentable distinction unless there are new or unexpected results. See *In re Larson*, 340 F.2d 965, 968, 144 USPQ 347, 349 (CCPA 1965) (holding that the use of a one piece construction instead of the structure disclosed in [the prior art] would be merely a matter of obvious engineering choice.").

Conclusion

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

Art Unit: 2111

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Donna K. Mason whose telephone number is (703) 305-1887. The examiner can normally be reached on Monday - Friday, 8:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark H. Rinehart can be reached on (703) 305-4815. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2111

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DKM



MARK H. RINEHART
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100